

LISTING OF CLAIMS

1. (Currently amended) ~~A composition useful in the treatment of pathological conditions characterized by neovascularization comprising an~~ An immunoconjugate protein having an effector domain comprising:

~~an Fc region of a human IgG1 immunoglobulin which can induce a cytolytic immune response or cytotoxic effect against a targeted cell, conjugated to a targeting domain which is comprising a mutant form of factor VII comprising one or two mutations selected from the group consisting of: a substitution of alanine for lysine-341, and a substitution of alanine for serine-344 that binds to tissue factor and has reduced blood coagulation activity relative to wild type factor VII.~~

2. (Currently amended) ~~A composition~~ An immunoconjugate according to claim 1 wherein the targeting domain ~~of the immunoconjugate protein~~ comprises human factor VII having a substitution of alanine for lysine-341.

3. (Currently amended) ~~A composition~~ An immunoconjugate according to claim 1 wherein the targeting domain of the immunoconjugate protein comprises human factor VII having a substitution of alanine for serine-344.

4. (Canceled) ~~A composition according to claim 1 further comprising a second immunoconjugate protein constructed as a dimer of two identical chains, each having an effector domain which is the Fc region of a human IgG1 immunoglobulin conjugated to a targeting domain which is a human scFv antibody or V_H fragment that binds to neovasculture.~~

5. (Canceled) ~~A composition according to claim 1 further comprising a second immunoconjugate protein constructed as a dimer of two identical chains, each having an effector domain which is the Fc region of an IgG1 immunoglobulin conjugated to a targeting domain which is a scFv or V_H antibody fragment that binds to a particular type of tumor cell.~~

6. (Currently amended) ~~A composition~~ An immunoconjugate according to claim 1 wherein the immunoconjugate protein is made by the process of culturing a cell which comprises an expression vector which encodes the immunoconjugate.
7. (Currently amended) ~~A composition~~ An immunoconjugate according to claim 6 wherein the expression vector is a replication-deficient adenoviral vector.
8. (Currently amended) ~~A composition~~ An immunoconjugate according to claim 6 wherein the expression vector is an adeno-associated expression vector.
9. (Withdrawn) A method for treating a disease associated with neovascularization, which comprises administering to a patient having the disease an effective amount of ~~at least one type of~~ an immunoconjugate protein according to claim 1 ~~having an effector domain which can induce a cytolytic immune response or cytotoxic effect against a targeted cell, conjugated to a targeting domain comprising a mutant form of factor VII that binds to tissue factor and has reduced blood clotting activity relative to wild type factor VII.~~
10. (Withdrawn) A method according to claim 9 wherein the targeting domain of the immunoconjugate protein comprises human factor VII having a substitution of alanine for lysine-341.
11. (Withdrawn) A method according to claim 9 wherein the targeting domain of the immunoconjugate protein comprises human factor VII having a substitution of alanine for serine-344.
12. (Withdrawn) A method according to claim 9 wherein a second immunoconjugate protein having an effector domain which is the Fc region of an IgG1 immunoglobulin conjugated to a targeting domain which is a human scFv or V_H antibody fragment that binds to neovasculature or to tumor cells is administered to the patient as adjunct therapy.

13. (Withdrawn) A method according to claim 9 wherein the disease is cancer involving a vascularized tumor.
14. (Withdrawn) A method according to claim 9 wherein the patient is treated by administration of the immunoconjugate protein in a pharmaceutically acceptable carrier.
15. (Canceled) ~~A method according to claim 9 wherein the patient is treated by administration of a replication deficient adenoviral vector or an adeno-associated vector carrying a cDNA encoding a secreted form of one or more types of immunoconjugate protein.~~
16. (Canceled) ~~A method according to claim 15 wherein a replication deficient adenoviral vector is employed.~~
17. (Withdrawn) A method for treating cancer in a patient, which comprises administering to the patient an effective amount of at least one type of immunoconjugate protein comprising the Fc region of a human IgG1 immunoglobulin conjugated to a targeting domain comprising a mutant form of human factor VII selected from the group consisting of native factor VII having a substitution of alanine for lysine-341, native factor VII having a substitution of alanine for serine-344, and native factor VII having a substitution of alanine for lysine-341 and for serine-344, ~~and mixtures thereof.~~
18. (Withdrawn) A method according to claim 17 wherein a second immunoconjugate protein having an effector domain which is the Fc region of a human IgG1 immunoglobulin conjugated to a targeting domain which is a human scFv or V_H antibody fragment that binds to the patient's type of tumor cell is administered to the patient as adjunct therapy.
19. (Withdrawn) A method according to claim 17 wherein the patient is treated by administering the immunoconjugate in a pharmaceutically acceptable carrier.

20. (Cancelled) ~~A method for treating cancer in a patient, comprising administering to the patient a replication deficient adenoviral vector or an adeno-associated vector carrying a cDNA encoding a secreted form of one or more types of immunoconjugate protein, wherein the immunoconjugate protein comprises the Fc region of a human IgG1 immunoglobulin conjugated to a targeting domain comprising a mutant form of human factor VII selected from the group consisting of native factor VII having a substitution of alanine for lysine 341, native factor VII having a substitution of alanine for serine 344, native factor VII having a substitution of alanine for lysine 341 and for serine 344, and mixtures thereof.~~

21. (Currently amended) ~~A composition.~~ An immunoconjugate according to claim 1 wherein the immunoconjugate protein forms [is constructed as] a dimer of two identical chains, each having an effector domain and a targeting domain.

22. (Canceled) ~~A composition according to claim 1 wherein the effector domain is the Fc region of an IgG1 immunoglobulin.~~

23. (Withdrawn) A method according to claim 9 wherein the immunoconjugate protein forms [is constructed as] a dimer of two identical chains, each having an effector domain and a targeting domain.

24. (Canceled) ~~A method according to claim 9 wherein the effector domain is the Fc region of an IgG1 immunoglobulin.~~

25. (Cancelled) ~~A composition comprising an immunoconjugate protein having an effector domain which can induce a cytolytic immune response or cytotoxic effect against a targeted cell, conjugated to a targeting domain that specifically targets human tumor cells or tumor vasculature endothelial cells, wherein the immunoconjugate does not comprise an scFv or a V_H fragment.~~

26. (Cancelled) ~~A composition according to claim 25 wherein the immunoconjugate protein is made by the process of culturing a cell which comprises an expression vector which encodes the immunoconjugate.~~

27. (Cancelled) ~~A method for treating a disease associated with neo-vascularization, which comprises administering to a patient having the disease an effective amount of at least one type of immunoconjugate protein having an effector domain which can induce a cytolytic immune response or cytotoxic effect against a targeted cell, conjugated to a targeting domain that specifically targets human tumor cells or tumor vasculature endothelial cells, wherein the immunoconjugate does not comprises an scFv or a V_H fragment.~~

28. (Cancelled) ~~The method according to claim 27 wherein the patient is treated by administration of the immunoconjugate protein in a pharmaceutically acceptable carrier.~~

29. (Cancelled) ~~A method for treating cancer in a patient, which comprises administering to the patient an effective amount of at least one type of immunoconjugate protein comprising the Fc region of a human IgG1 immunoglobulin conjugated to a targeting domain that specifically targets human tumor cells or tumor vasculature endothelial cells, wherein the immunoconjugate does not comprises an scFv or a V_H fragment.~~

30. (Cancelled) ~~A method according to claim 29 wherein the patient is treated by administering the immunoconjugate in a pharmaceutically acceptable carrier.~~

31. (Cancelled) ~~A composition according to claim 25 wherein the immunoconjugate protein is constructed as a dimer of two identical chains, each having an effector domain and a targeting domain.~~

32. (Cancelled) ~~A composition according to claim 25 wherein the effector domain is the Fc region of an IgG1 immunoglobulin.~~

33. (Cancelled) ~~A method according to claim 27 wherein the immunoconjugate protein is constructed as a dimer of two identical chains, each having an effector domain and a targeting domain.~~

34. (Cancelled) ~~A method according to claim 27 wherein the effector domain is the Fe region of an IgG1 immunoglobulin.~~

35. (Withdrawn) A method according to claim 9 wherein the disease is rheumatoid arthritis.

36. (Withdrawn) A method according to claim 9 wherein the disease is exudative form of macular degeneration.

37. (Cancelled) ~~The method of claim 36 wherein the effector domain is the Fe region of a human IgG1 immunoglobulin conjugated to a targeting domain comprising a mutant form of human factor VII selected from the group consisting of native factor VII having a substitution of alanine for lysine 341, native factor VII having a substitution of alanine for serine 344, native factor VII having a substitution of alanine for lysine 341 and for serine 344, and mixtures thereof.~~

38. (Withdrawn) A method according to claim 9 wherein the disease is atherosclerosis.

39. (Cancelled) ~~An expression vector which encodes a secreted form of an immunoconjugate protein having an effector domain which can induce induces a cytolytic immune response or cytotoxic effect against a targeted cell, conjugated to a targeting domain that specifically targets human tumor cells or tumor vasculature endothelial cells, wherein the immunoconjugate ~~doe not comprises~~ does not comprise an scFv or a V_H fragment.~~

40. (Cancelled) ~~The expression vector of claim 39 wherein the targeting domain is a form of factor VII that binds to tissue factor.~~

- ~~41. (Cancelled) The expression vector of claim 40 wherein the form of factor VII is a mutant form which has reduced blood coagulation activity relative to wild type factor VII.~~
- ~~42. (Cancelled) The expression vector of claim 40 which is a replication deficient adenoviral vector or adeno-associated vector.~~
- ~~43. (Cancelled) An expression vector according to claim 40 wherein the targeting domain of the immunoconjugate protein comprises human factor VII having a substitution of alanine for lysine 341.~~
- ~~44. (Cancelled) An expression vector according to claim 40 wherein the targeting domain of the immunoconjugate protein comprises human factor VII having a substitution of alanine for serine 344.~~
- ~~45. (Cancelled) An expression vector according to claim 40 wherein the targeting domain of the immunoconjugate protein comprises human factor VII having a substitution of alanine for each of serine 344 and lysine 341.~~
46. (Currently amended) ~~A composition.~~ An immunoconjugate according to claim 1 wherein the targeting domain of the immunoconjugate protein comprises human factor VII having a substitution of alanine for each of serine-344 and lysine-341.
- ~~47. (Cancelled) A composition useful in the treatment of pathological conditions characterized by neo-vascularization comprising an immunoconjugate protein having an effector domain which can induce a cytolytic immune response or cytotoxic effect against a targeted cell, conjugated to a targeting domain which is a form of factor VII that binds to tissue factor.~~
- ~~48. (Cancelled) A method for treating a disease associated with neo-vascularization, which comprises administering to a patient having the disease an effective amount of at least one type of immunoconjugate protein having an effector domain which can induce induces a cytolytic immune response or cytotoxic effect against a targeted cell,~~

~~conjugated to a targeting domain comprising a form of factor VII that binds to tissue factor.~~

49. (Withdrawn) A method for treating exudative macular degeneration in a patient according to claim 36, ~~which comprises administering to the patient an effective amount of at least one type of wherein the immunoconjugate protein comprising the Fc region of a human IgG1 immunoglobulin conjugated to a targeting domain comprising~~ comprises a mutant form of human factor VII selected from the group consisting of native factor VII having a substitution of alanine for lysine 341, native factor VII having a substitution of alanine for serine 344, native factor VII having a substitution of alanine for lysine-341 and for serine-344, and mixtures thereof.
- ~~50. (Cancelled) A method for treating a disease associated with neovascularization, which comprises administering to a patient having the disease an expression vector encoding at least one type of immunoconjugate protein having an effector domain which can induce a cytolytic immune response or cytotoxic effect against a targeted cell, conjugated to a targeting domain comprising a form of factor VII that binds to tissue factor.~~
- ~~51. (Cancelled) The method of claim 50 wherein the disease is cancer.~~
52. (Cancelled) ~~The method of claim 50 wherein the effector domain is Fc of an immunoglobulin.~~
- ~~53. (Cancelled) The method of claim 50 wherein the form of factor VII is a mutant form which has reduced blood coagulation activity relative to wild type.~~
54. (New) The immunoconjugate protein according to claim 1 which further comprises a cytotoxic radioactive tag.
55. (New) The immunoconjugate protein of claim 1 wherein the mutant form of human factor VII is native factor VII having a substitution of alanine for lysine-341.
56. (New) The immunoconjugate protein of claim 1 wherein the mutant form of human factor VII is native factor VII having a substitution of alanine for serine-344.

57. (New) The immunoconjugate protein of claim 1 wherein the mutant form of human factor VII is native factor VII having a substitution of alanine for lysine-341 and for serine-344.